

ordinary skill in the art.

[0024] The plurality of first solder members 106 are composed of a solder material having a first melting temperature, such as, but not limited to, a lead tin eutectic alloy with a melting temperature of approximately 183 degrees centigrade. Furthermore, the plurality of first solder members have a first dimension, such as, but not limited to, approximately 0.6 millimeters in diameter. In the preferred embodiment, the first solder member 106 is a solder ball, but as stated above, may include any other solder member shape.

[0025] Further disposed within the solder ball array 106 are the plurality of second members 108. The second members 108 have a second dimension and a second melting point. The second members 108 are composed of a material having a melting temperature higher than the first melting point, such as, but not limited to, a high lead content material, such as, but not limited to, over approximately 95 percent lead, which has a melting temperature approximately greater than 300 degrees centigrade, and further consist of any member capable of being dispensed by the solder dispensing machine. In one embodiment, the second members 108 are in the shape of solder balls, as readily dispensed by the solder dispensing machine. In one embodiment, the second dimension of the second members 108 is approximately 0.45 millimeters in diameter, which provides a minimum dimension between the application specific integrated circuit 110 and the item upon which the carrier substrate 104 may be soldered. As recognized by one having ordinary skill in the art, any other suitable dimension for the second member may be utilized and the stated dimension is not meant to be so limiting herein.

[0026] FIG. 2 illustrates the integrated circuit 100 and the carrier substrate 102, more specifically a top surface 112 having a heat sink 114 and a plurality of chip scale packaged memories 116 disposed thereon. For further reference, the circuit having the application specific integrated circuit 110 on the bottom surface 102 and the heat sink 112 with multiple chip scale packaged memories 116 is discussed in copending Patent Application entitled INTEGRATED CIRCUIT HAVING MEMORY DISPOSED

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attorney.